

CLAIMS

1. A method of establishing a communications path between a first entity and a second entity in a communications network comprising at least two address domains, said address domains being connected by two or more address translators, said method comprising the steps of:-
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- (i) sending a call set-up message from the first entity to a first one of the network address translators via only a first one of the address domains, said call set-up message containing an address of the first entity within the first address domain;
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- (ii) receiving the call set-up message at the first network address translator and retaining the address of the first entity within the first address domain in the call set-up message as well as adding information about the identity of the first address domain to the call set-up message;
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- (iii) forwarding the call set-up message to the second entity via a second one of the address domains and a second one of the address translators such that the information in the call set-up message can be used to establish a communications path from the second entity to the first entity which excludes one or more of said address domains.
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2. A method as claimed in claim 1 wherein said step (ii) of receiving further comprises creating a binding between a second address domain address for a port at the first address translator and the first address domain address of the first entity; and once said binding is created adding the second address domain address of that port to the call set-up message.
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3. A method as claimed in claim 1 which further comprises, after said step (ii) of receiving, forwarding the call set-up message to a third network address domain via a third network address translator.
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4. A method as claimed in claim 3 which further comprises at the third network address translator, adding information about an identity of the third address domain to the call set-up message.
5. A method as claimed in claim 1 wherein said first address translator is arranged to access information from another network entity in order to carry out the method of step (ii) of claim 1 in respect of adding information about the identity of the first address domain to the call set-up message.
6. A method as claimed in claim 1 wherein said communications path is arranged to provide a service that is hosted by one or more servers within the communications network but not within the first address domain.
7. A method as claimed in claim 1 wherein said first address domain is provided in a private region of the communications network and said second address domain is provided in a public region of the communications network.
8. A method as claimed in claim 1 wherein said communications network is selected from an internet protocol communications network or an asynchronous transfer mode communications network.
9. An address translator suitable for connection between a first and a second address domain in a communications network, said network address translator comprising:-
 - (i) an input arranged to receive a call set-up message from an entity in the first address domain, said call set-up message comprising an address of the entity within the first address domain;
 - (ii) a processor arranged to modify the received call set-up message by adding information about the identity of the first address domain whilst retaining the address of the entity within the first address domain; and also adding information about an address of the network address translator itself within the second address domain to the call set-up

10. An address translator as claimed in claim 9 wherein said processor is provided externally to the address translator and is connected to the address translator by a communications network.

11. An address translator as claimed in claim 9 which further comprises an output arranged to forward the call set-up message to the second address domain.

12. A method of operating an address translator which is connected between a first and a second address domain in a communications network, said method comprising the steps of:-

(i) receiving a call set-up message from an entity in the first address domain, said call set-up message comprising an address of the entity within the first address domain;

(ii) modifying the received call set-up message by adding information about the identity of the first address domain whilst retaining the address of the entity within the first address domain in the call set-up message; and also adding information about an address of the network address translator itself within the second address domain to the call set-up message; said address being bound to the address of the entity in the first address domain.

13. A communications network comprising an address translator as claimed in claim 9.

14. A computer program arranged to control a network address translator in order to carry out the method of claim 12.

15. A computer program as claimed in claim 14 which is stored on a computer readable medium.

16. A call set-up message comprising a transport address, one or more previous transport addresses each corresponding to a

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different address domain; and, for each previous transport address an associated network identifier.

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